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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/854,153	05/11/2001	Laurence J. Newell	5957-41409	9449
35690	7590	06/15/2006	EXAMINER	
MEYERTONS, HOOD, KIVLIN, KOWERT & GOETZEL, P.C.			BELLO, AGUSTIN	
700 LAVACA, SUITE 800			ART UNIT	
AUSTIN, TX 78701			PAPER NUMBER	

2613

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/854,153

Applicant(s)

NEWELL ET AL.

Examiner

Agustin Bello

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bodeep (U.S. Patent No. 5,020,049) in view of Maeda (U.S. Patent No. 5,351,148).

Regarding claim 1 and 7, Bodeep teaches an optical fiber communications system including an optical fiber, a method for compensating for dispersion effects in the optical fiber, the method comprising: receiving at least two low-speed channels (reference numerals 12-14 in Figure 1), each low-speed channel allocated a different frequency band of an optical fiber communications system for transmission across the communications system (column 3 lines 59-62);, adjusting a power of each low-speed channel to compensate for attenuation caused by dispersion (column 4 lines 23-25); and frequency division multiplexing (reference numeral 15 in Figure 1) the power-adjusted low-speed channels to produce an electrical high-speed channel for transmission across the communications system. Bodeep differs from the claimed invention in that Bodeep fails to specifically teach for each low-speed channel, estimating an attenuation caused by dispersion resulting from transmission of the low-speed channel across the optical fiber in the frequency band allocated to the low-speed channel. However, Bodeep suggests

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estimating the attenuation for each low-speed channel caused by dispersion resulting from transmission of the low-speed channel across the optical fiber in the frequency band allocated to the low-speed channel (Figure 2, 5-11). Furthermore, Maeda, in the same field of frequency division multiplexed optical systems, teaches for each low-speed channel, estimating an attenuation caused by dispersion resulting from transmission of the low-speed channel across the optical fiber in the frequency band allocated to the low-speed channel (Figure 1-3 and 5). One skilled in the art would have been motivated to estimate the attenuation of the communications system for each of the low-speed channels in order to individually compensate channels for the attenuation presented by the transmission system. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to estimate the attenuation of the communications system for each of the low-speed channels and compensate for the estimated attenuation of the communications system via adjustment of the power of each low-speed channel.

Regarding claims 2 and 8, both Bodeep and Maeda that the step of adjusting a power of each low-speed channel comprises applying a gain to each low-speed channel which is equal in magnitude to the estimated attenuation for that low-speed channel (reference numeral 724 in Figure 1 of Maeda; column 4 lines 23-25 of Bodeep).

Regarding claims 3, 4, 9, and 10, the combination of Bodeep and Maeda is clearly capable of applying a constant gain or gain ramp to each low-speed channel which is equal in magnitude to the estimated attenuation at a center frequency of the frequency band allocated to the low-speed channel (reference numeral 724 in Figure 1 of Maeda; column 4 lines 23-25 of Bodeep). Furthermore, it would have been obvious to one skilled in the art to match the

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magnitude of the estimated attenuation with the magnitude of the gain applied to the low speed channels. Moreover, one skilled in the art would clearly have recognized that since the low speed channels are divided into frequency bands, most of the attenuation would have occurred at the center frequency, thereby motivating one skilled in the art to apply a constant gain of a magnitude equal to the estimated attenuation to the center frequency of the frequency band. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to adjust the power of each low-speed channel by applying a constant gain to each low-speed channel which is equal in magnitude to the estimated attenuation at a center frequency of the frequency band allocated to the low-speed channel.

Regarding claims 5, 6, 11, and 12, the combination of Bodeep and Maeda differs from the claimed invention in that it fails to specifically teach that the step of estimating a gain for propagation through the optical fiber comprises estimating a gain due to chromatic dispersion or polarization mode dispersion for the frequency band allocated to the low-speed channel. However since both systems monitor the various characteristics of the transmission system and makes adjustments based on the measurements, one skilled in the art would clearly have recognized that gain due to chromatic dispersion or polarization mode dispersion would have also been measured by the system of Bodeep and Maeda, and power changes made based upon the measurements. One skilled in the art would have been motivated to measure the chromatic dispersion or polarization mode dispersion for the frequency band allocated to the low-speed channel in order to improve the quality of signal transmission, the focus of both Bodeep and Maeda. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to measure the chromatic dispersion or polarization mode dispersion for the frequency

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band allocated to the low-speed channel in order to estimate the gain of the communication system.

Response to Arguments

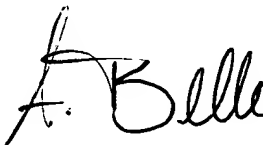
7. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Agustin Bello whose telephone number is (571) 272-3026. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571)272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


AGUSTIN BELLO
PRIMARY EXAMINER